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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,849	08/31/2001	Moshe Finarov	FINAROV=1A	8535

1444 7590 06/16/2003

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EXAMINER

PHAM, HOA Q

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 06/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,849

Applicant(s)

FINAROV ET AL.

Examiner

Hoa Q. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/326,665.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,5,6. 6) ☐ Other:

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/326,665, filed on 6/7/1999.

Claim Rejections - 35 USC § 112

2. Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 30 is dependent on itself. Should it depend on claim 20?

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 20-49 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,292,265. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are broader than what was claimed in the patent and all the limitations of the present claims are recited in the patent claims. For example, the limitations of claim 20 are disclosed in claim 1 of the patent, the limitations of claim 21 are recited in claim 11 of the patent, etc....

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 20-22, 26-32 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roth et al (5,272,117) in view of Chuang et al (6,137,570).

Regarding claims 20, 47, Roth et al discloses a method for planarizing a layer of material in which the residue and particles on the etch stop layer (18) is detected (see column 4, lines 42-68). Roth et al does not explicitly teach the use of an optical detection device for detecting residues; however, such a feature is known in the art as taught by Chuang et al. Chuang et al teaches the use of an optical inspection device for inspecting the residues in which light from the light source (402) is incident on the a layer (408) and scattered light or diffracted light from the surface is detected by a

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detector (figures 4, 5 and column 6, lines 37-44). One of ordinary skill in the art at the time the invention was made to include in Roth et al an optical inspection device as taught by Chuang et al because Chuang et al suggests that the system is used for detecting residues.

Regarding claims 21, 29 and 31, Chuang et al teaches that the sensor is a camera or a microscope for providing spatial imaging of the substrate surface (column 4, lines 6-8).

Regarding claims 22, 30 and 32, see column 3 lines 14-26 of Chuang et al for comparison between different sites of the structure.

Regarding claims 26-27, see figures 4-5 of Roth et al.

Regarding claim 28, see column 15, lines 34-38 of Chuang et al for controlling the model of the article.

7. Claims 23-25, 33-46, 48-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roth et al and Chuang et al as applied to claims 20-22, 26-32, and 47 above, and further in view of Holzapfel et al (5,872,633) or Hyakumura (4,999,508).

Both Roth and Chuang et al do not teach that the residues or thickness of a layer is determined on the basis of a spectrophotometer; however, such a feature is known in the art as taught by Holzapfel et al or Hyakumura.

Holzapfel et al (of record) discloses a method and apparatus for detecting removal of thin film layer during planarization in which the thickness of the layers is

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determined on the basis of the spectral characteristics of the light components reflected from the layers. See figure 3.

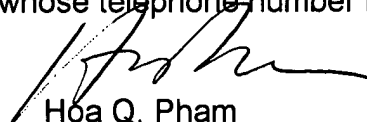
Hyakumura (of record) discloses an optical film thickness measuring device in which the thickness of the layer is determined on the basis of the spectral characteristics of the light components reflected from the layer. See figures 1 and 4.

Those of ordinary skill in the art at the time the invention was made to replace the optical inspection system of Chuang et al by a spectrophotometer as taught by Holzapfel et al or Hyakumura because they are function in the same manner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoa Q. Pham whose telephone number is (703) 308-4808. The examiner can normally be reached on 6:30 AM to 5 PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Hoa Q. Pham
Primary Examiner
Art Unit 2877

HP
June 11, 2003